

CLAIMS

1. A video conferencing terminal comprising:
 - an encoder means that receives a baseband audio signal and a baseband video signal and creates compressed audio packets and compressed audio-video packets,
 - a network interface means that receives the compressed audio packets and the compressed audio-video packets from the encoder means, IP encapsulates the compressed audio packets and the compressed audio-video packets, transmits the IP packets onto an IGMP network, requests audio packets and audio-video packets from the network, and recovers compressed audio packets and compressed audio-video packets from IP packets received from the network, and
 - a decoder means for receiving compressed audio packets and compressed audio-video packets from the network interface means and generating a baseband video signal and multiple baseband audio signals.
2. A terminal according to claim 1, further comprising an audio mixer for combining the baseband audio signals to provide an audio mix signal.
3. Video conferencing apparatus for connection to an IGMP network, said apparatus comprising a controlling terminal and at least first and second controlled terminals, wherein each terminal includes an encoder means that receives a baseband audio signal and a baseband video signal and creates compressed audio packets and compressed audio-video packets, a network interface means that receives the compressed audio packets and the compressed audio-video packets from the encoder means, IP encapsulates the compressed audio packets and the compressed audio-video packets, transmits the IP packets onto the network, requests audio packets from the network, receives IP packets from the network, and recovers compressed audio packets from the IP packets received from the network, and a decoder means for receiving compressed audio packets from the network interface means and generating multiple baseband audio signals,

and wherein each controlled terminal is configured to request audio-video packets from the controlling terminal and to request audio packets from each of the other controlled terminal.

4. Apparatus according to claim 3, wherein the network interface means of the first controlled terminal requests audio-video packets from the controlling terminal and the decoder means of the first controlled terminal generates a baseband video signal.

5. Apparatus according to claim 3, wherein each terminal further comprises an audio mixer for combining the baseband audio signals and generating an audio mix signal.

6. Apparatus according to claim 3, wherein the first controlled terminal is configured to request audio-video packets from the second controlled terminal, the decoder means of the first controlled terminal generates both a controlling terminal baseband video signal and a second controlled terminal baseband video signal, and the first controlled terminal further comprises a video mixer for combining the baseband video signals and generating a video mix signal.

7. Apparatus according to claim 3, wherein the first controlled terminal is configured to request audio-video packets from the controlling terminal only.

8. A method of conducting a video conference involving at least first, second and third conference sites connected to a network, the method comprising:

(a) at the first site, acquiring an audio signal and a video signal and generating IP encapsulated audio packets and audio-video packets,

(b) at the second site, acquiring an audio signal and a video signal and generating IP encapsulated audio-video packets,

(c) at the third site, acquiring an audio signal and generating IP encapsulated audio packets,

(d) at the first site, receiving audio-video packets from the second site and generating a second site audio signal and a second site video signal therefrom, displaying a video image based on the second site video signal, receiving audio packets from the third site and generating a third site audio signal therefrom, and combining the second site audio signal and the third site audio signal to generate a first site audio mix signal,

(e) at the second site, receiving audio packets from the first site and generating a first site audio signal therefrom, receiving audio packets from the third site and generating a third site audio signal therefrom, and combining the first site audio signal and the third site audio signal to generate a second site audio mix signal, and

(f) at the third site, receiving audio packets from the first site and generating a first site audio signal therefrom, receiving audio-video packets from the second site and generating a second site audio signal and a second site video signal therefrom, displaying a video image based on the second site video signal, and combining the first site audio signal and the second site audio signal to generate a third site audio mix signal.

9. A method according to claim 8, wherein step (d) comprises requesting audio-video packets from the second site and requesting audio packets from the third site, step (e) comprises requesting audio packets from the first and third sites, and step (f) comprises requesting audio-video packets from the second site and requesting audio packets from the first site.

10. A video conference system comprising an IGMP network, a controlling terminal and at least first and second controlled terminals connected to the network, each terminal being connected to the network and comprising:

an acquisition means that acquires an audio signal and a video signal and generates IP encapsulated audio packets and IP encapsulated audio-video packets, and

a means for requesting audio packets from each of the other terminals and recovering baseband audio signals from the audio packets,

and wherein the first controlled terminal comprises:

a means for requesting audio-video packets from the controlling terminal and for recovering a controlling terminal audio signal and a controlling terminal video signal from the audio-video packets, and

a means for combining the controlling terminal audio signal with an audio signal recovered from the audio packets received from the second controlled terminal.

11. A method of conducting a video conference involving at least first, second and third conference sites connected to an IGMP network, the method comprising, at each site:

acquiring an audio signal and a video signal and generating IP encapsulated audio packets and IP encapsulated audio-video packets,

and further comprising, at the first site:

requesting audio-video packets from the second site,

receiving audio-video packets from the second site, generating a second site audio signal and a second site video signal therefrom, and displaying a video image based on the second site video signal,

receiving audio packets from the third site and generating a third site audio signal therefrom, and

combining the second site audio signal and the third site audio signal and generating a first site audio mix signal,

and at the second site:

receiving audio packets from the first site and generating a first site audio signal therefrom,

receiving audio packets from the third site and generating a third site audio signal therefrom, and

combining the first site audio signal and the third site audio signal and generating a second site audio mix signal,

and at the third site:

receiving audio packets from the first site and generating a first site audio signal therefrom,

requesting audio-video packets from the second site,

receiving audio-video packets from the second site, generating a second site audio signal and a second site video signal therefrom, and displaying a video image based on the second site video signal, and

combining the first site audio signal and the second site audio signal and generating a third site audio mix signal.